~~CONFIDENTIAL~~

94

251 pgs

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APOLLO 11 TECHNICAL CREW DEBRIEFING (U)

CLASSIFICATION CHANGED TO U

BY AUTHORITY OF E.O. 11652

DATE 6/1/72 3-11-72

JULY 31, 1969

PREPARED BY:
MISSION OPERATIONS BRANCH
FLIGHT CREW SUPPORT DIVISION
VOL. I

GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material ... United States within the me... 3 and 794, the transmission ... person is prohibited by ...

NOTICE: This document may be exempt from public disclosure under the Freedom of Information Act (5 U.S.C. 552). Requests for its release to persons outside the U. S. Government should be handled under the provisions of NASA Policy Directive 1382.2.

CENTER

~~CONFIDENTIAL~~

INDEXING DATA

DATE	OPR	#	T	PGM	SUBJECT	SIGNATOR	LOC
07-31-69	MSC		R	APO	(Title)	MSC	

COLLINS I think particularly when you get into the later flights of extended EVA's and lunar activity, somehow the crew must place themselves in a frame of mind of looking on the separation of the LM as the beginning of the flight plan and to relax, get plenty of sleep, and conserve their energies in all the events leading up to that point. To arrive in lunar orbit tired can create problems and it's possible to do that if you don't approach it in the right frame of mind.

ARMSTRONG I think Mike's hit the nail on the head. We did precisely that. We got a lot of rest and got into lunar orbit eager to go to work and that's a particularly fortunate position to be in.

COLLINS This is something we've talked about before the flight and I don't know how you can get yourself in that frame of mind but I think it is a frame of mind. You have to get yourself convinced that there will be a nice relaxing couple of days going to the moon.

ALDRIN The first unusual thing that we saw I guess was 1 day out or something pretty close to the moon. It had a sizeable dimension to it, so we put the monocular on it.

CONFIDENTIAL

COLLINS How'd we see this thing? Did we just look out the window and there it was?

ALDRIN Yes, and we weren't sure but what it might be the S-IVB. We called the ground and were told the S-IVB was 6000 miles away. We had a problem with the high gain about this time, didn't we?

COLLINS There was something. We felt a bump or maybe I just imagined it.

ARMSTRONG He was wondering whether the MESA had come off.

COLLINS I don't guess we felt anything.

ALDRIN Of course, we were seeing all sorts of little objects going by at the various dumps and then we happened to see this one brighter object going by. We couldn't think of anything else it could be other than the S-IVB. We looked at it through the monocular and it seemed to have a bit of an L shape to it.

ARMSTRONG Like an open suitcase.

ALDRIN We were in PTC at the time so each one of us had a chance to take a look at this and it certainly seemed to be within our vicinity and of a very sizeable dimension.

CONFIDENTIAL

ARMSTRONG We should say that it was right at the limit of the resolution of the eye. It was very difficult to tell just what shape it was. And there was no way to tell the size without knowing the range or the range without knowing the size.

ALDRIN So then I got down in the LEB and started looking for it in the optics. We were grossly mislead because with the sextant off focus what we saw appeared to be a cylinder.

ARMSTRONG Or really two rings.

ALDRIN Yes.

ARMSTRONG Two rings. Two connected rings.

COLLINS No, it looked like a hollow cylinder to me. It didn't look like two connected rings. You could see this thing tumbling and, when it came around end-on, you could look right down in its guts. It was a hollow cylinder. But then you could change the focus on the sextant and it would be replaced by this open-book shape. It was really weird.

ALDRIN I guess there's not too much more to say about it other than it wasn't a cylinder.

CONFIDENTIAL

COLLINS It was during the period when we thought it was a cylinder that we inquired about the S-IVB and we'd almost convinced ourselves that's what it had to be. But we don't have any more conclusions than that really. The fact that we didn't see it much past this one time period — we really don't have a conclusion as to what it might have been, how big it was, or how far away it was. It was something that wasn't part of the urine dump, we're pretty sure of that.

Skipping ahead a bit, when we jettisoned the LM, you know we fired an explosive charge and got rid of the docking rings and the LM went boom. Pieces came off the LM. It could have been some Mylar or something that had somehow come loose from the LM.

ALDRIN We thought it could have been a panel, but it didn't appear to have that shape at all.

COLLINS That's right, and for some reason, we thought it might have been a part of the high gain antenna. It might have been about the time we had high gain antenna problems. In the back of my mind, I have some reason to suspect that its origin was from the spacecraft.

CONFIDENTIAL

ALDRIN The other observation that I made accumulated gradually. I don't know whether I saw it the first night, but I'm sure I saw it the second night. I was trying to go to sleep with all the lights out. I observed what I thought were little flashes inside the cabin, spaced a couple of minutes apart and I didn't think too much about it other than just note in my mind that they continued to be there. I couldn't explain why my eye would see these flashes. During transearth coast, we had more time and I devoted more opportunity to investigating what this could have been. It was at that point that I was able to observe on two different occasions that, instead of observing just one flash, I could see double flashes, at points separated by maybe a foot. At other times, I could see a line with no direction of motion and the only thing that comes to my mind is that this is some sort of penetration. At least that's my guess, without much to support it; some penetration of some object into the spacecraft that causes an emission as it enters the cabin itself. Sometimes it was one flash on entering. Possibly departing from an entirely different part of the cabin, outside the field of view. The double flashes appeared to have an entry and then impact on something such as the struts. For a while, I thought it might have been

CONFIDENTIAL

ALDRIN (CONT'D) some static electricity because I was also able, in moving my hand up and down the sleep restraint, to generate very small sparks of static electricity. But there was a definite difference between the two as I observed it more and more. I tried to correlate this with the direction of the sun. When you put the window shades up there is still a small amount of leakage. You can generally tell within 20 or 30 degrees the direction of the sun. It seemed as though they were coming from that general direction; however, I really couldn't say if there was near enough evidence to support that these things were observable on the side of the spacecraft where the sun was. A little bit of evidence seemed to support this. I asked the others if they had seen any of these and, until about the last day, they hadn't.

ARMSTRONG Buzz, I'd seen some light, but I just always attributed this to sunlight, because the window covers leak a little bit of light no matter how tightly secured. The only time I observed it was the last night when we really looked for it. I spent probably an hour carefully watching the inside of the spacecraft and I probably made 50 significant observations in this period.

CONFIDENTIAL

ALDRIN Sometimes a minute or two would go by and then you'd see the two within the space of 10 seconds. On an average, I'd say just as a guess it was maybe something like one a minute. Certainly more than enough to convince you that it wasn't an optical illusion. It did give you a rather funny feeling to contemplate that something was zapping through the cabin. There wasn't anything you could do about it.

ARMSTRONG It could be something like Buzz suggested. Mainly a neutron or some kind of an atomic particle that would be in the visible spectrum.

216 pgs
94

~~CONFIDENTIAL~~

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APOLLO 11 TECHNICAL CREW DEBRIEFING (U)

CLASSIFICATION CHANGED TO U
BY AUTHORITY OF E.O. 11652
DATE 6/1/72 3/4/76 Lady Q Hoe

JULY 31, 1969

PREPARED BY:
MISSION OPERATIONS BRANCH
FLIGHT CREW SUPPORT DIVISION
VOL. II

GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material c
within the mean
transmission or
prohibited by la

United States
and 794, the
person is

NOTICE: This document may be exempt from public disclosure under the Freedom of Information Act (5 U.S.C. 552). Requests for its release to persons outside the U. S. Government should be handled under the provisions of NASA Policy Directive 1382.2.

CENTER

~~CONFIDENTIAL~~

INDEXING DATA

DATE	OPR	#	T	PGM	SUBJECT	SIGNATOR	LOC
07-31-69	MSC			APO	(Title)	MSC	078-62

DUP?

21.0 VISUAL SIGHTINGS

ARMSTRONG Most of the items in Section 21, Visual Sightings, have been previously reported.

21.4 TRANSLUNAR AND TRANSEARTH FLIGHT

ALDRIN There was only one minor observation returning from the Moon. Looking back at it, at a time after Mars had passed behind the Moon, there was one time period where I imagined that the image of Mars was coming from a region where it couldn't come from, because it was in a dark portion of the Moon. This obviously was an optical illusion of some sort.

ARMSTRONG I suspect that it was, in fact, just immediately adjacent to the horizon.

ALDRIN We must have looked at it immediately after it had come from the back side.

ARMSTRONG Yes.

21.5 LUNAR ORBIT

ALDRIN In lunar orbit, following ascent, we did note and mention to the ground that approaching CDH when the Earth came up above the lunar horizon, I observed what appeared to be a fairly bright light source which we tentatively ascribed

CONFIDENTIAL

ALDRIN (CONT'D)

to a possible laser. That seemed to be the best possible explanation until we were coming back in the command module approaching the Earth and were able to observe something that gave about the same appearance. When putting the monocular on the light source, it appeared as though it was the reflection of the Sun from a relatively smooth body of water such as a lake. I think we've revised our initial conclusion as to what the source of that light was that we saw coming from the Earth. If no one owns up to having beamed the laser toward the Moon at that time, it was more probably a reflection off a lake. I still think it's an unusual phenomenon, at that distance, to see so bright a source of light. In the film, it didn't appear as though this was going to show up at all. The Earth was too bright.

CONFIDENTIAL